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The Community Well-Being Index (CWB): Examining Well-Being in Inuit Communities, 1981-2006

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Canada

The Community Well-Being Index (CWB):
Examining Well-Being in Inuit Communities, 1981-2006

Executive Summary

The Community Well-Being (CWB) Index is a means of measuring socio-economic well-being in First Nations, Inuit and non-Aboriginal communities. CWB Index scores are derived from Canadian Census of Population data and are composed of the following four indicators: income (based on income per capita), education (based on high school and university completion rates), housing (based on housing quantity and quality) and labour force activity (based on employment and labour force participation rates). CWB Indices have been calculated for 1981, 1991, 1996, 2001 and 2006. The Community Well-Being Index is developed and calculated using Census data from Statistics Canada, but all research and analyses are developed by Aboriginal Affairs and Northern Development Canada.

Average CWB scores for Inuit and non-Aboriginal communities increased between 1981 and 2006, though Inuit community scores did not improve appreciably in the most recent intercensal period (2001-2006). Non-Aboriginal communities' average CWB did increase between 2001 and 2006, but this improvement may owe partly to changes in census methodology, namely changes to the education component.

Looking at the components of the CWB Index in Inuit communities compared to non-Aboriginal Canadian communities, labour force activity remained fairly steady from 1981 to 2006. Income and housing gaps narrowed over the period (though the housing gap widened slightly in the last intercensal period from 2001 to 2006). The gap in education also widened during the last intercensal period.

Of the four regions of Inuit Nunangat, Nunatsiavut (Labrador) had the greatest increase from 1981 to 2006, and was the only region to show an increase between 2001 and 2006. Nunavik, (Quebec) had the lowest average score of all regions both in 1981 and 2006, though there were fluctuations in the order between the regions. Despite that, Nunavik showed much improvement from 1981 to 2006, and the four regional average scores were much closer by the end of the study period than at the beginning. Due to the relatively small number of Inuit communities, particularly in Nunatsiavut and the Inuvialuit Region, we must look upon some of the trends and variations in regional scores with caution.

Background

Along with First Nations and Métis, Inuit are one of the three Aboriginal groups identified under *The Constitution Act (1982).* They have lived in what is now northern Canada for over 5,000 years, with their unique history, culture and traditions (ITK 2004). Although Inuit today largely participate in Western structures such as the formal education system and the wage-based economy, many Inuit alive today were born into and lived a traditional nomadic lifestyle for the first part of their lives.

In 2006, 50,485 individuals reported Inuit identity in the Census. Almost 80% of these live in settlements across Canada's north, under one of four land claim agreements. Inuit Nunangat (meaning place where Inuit live) comprises Nunatsiavut (Northern Labrador), Nunavik (Northern Quebec), the Territory of Nunavut and the Inuvialuit Settlement Region (Northwest Territories).

As with other Aboriginal groups, Inuit lag behind other Canadians in many socio-economic indicators, including education, income and unemployment (INAC & ITK 2006a, b, c). What these statistics lack, however, is the community perspective on socio-economic conditions. This is an important factor in light of the efforts of Inuit to take a leading role in the regions where they live.

Aboriginal Affairs and Northern Development Canada's first attempt to systematically and quantitatively measure the well-being of Inuit Nunangat was the Inuit Human Development Index, a measure modeled after the United Nations Development Programme's Human Development Index (HDI).The HDI defines well-being in terms of educational attainment, income and life expectancy, and has been used since 1990 to measure well-being in some 170 countries. Analyses of the Inuit HDI 1991-2001 revealed that the well-being of Inuit regions had been increasing over that period, but remained lower than that of the reference population (Senécal *et al.* 2007). Anecdotal evidence, however, suggested that well-being varied greatly across Aboriginal communities and that the Inuit HDI, therefore, might be providing an incomplete picture of well-being. The Community Well-Being (CWB) Index was thus developed as a community-level complement to the national- and regional-level HDI for First Nations and Inuit communities in Canada.

The CWB index was developed to look at socio-economic well-being at the community level. Since community-level life expectancy estimates would be either unreliable or unavailable due to the small population size of communities, the index had to be modified from the original HDI. In addition, housing and labour force activity were considered areas of concern in First Nations and Inuit communities, and were thus introduced into the index[1].

Methodology

Defining the CWB Index

A community's CWB index score is a single number that can range from a low of 0 to a high of 100. It is composed of data on income, education, housing conditions and labour force activity. These components are described below. Additional technical details are provided in *The Community Well-Being (CWB) Index: Methodological Details*, available at http://www.ainc-inac.gc.ca/ai/rs/pubs/cwb/cwbmd-eng.asp

1) Income
The Income component of the CWB Index is defined in terms of total income per capita, in accordance with the following formula:

$$Income\ Score = \left(\frac{Log(income\ \ per\ capita) - Log(\$2{,}000)}{Log(\$40{,}000) - Log(\$2{,}000)} \right) x100$$

The formula maps each community's income per capita onto a theoretical range. Doing so allows income per capita to be expressed as a percentage, which is the metric in which the other components of the index are naturally expressed. A range of $2,000 to $40,000 dollars was used because it coincides, approximately, with the lowest and highest incomes per capita found in Canadian communities.

Note that the formula converts dollars of income per capita into logarithms. This is done to account for "the diminishing marginal utility of income." According to this principle, those who occupy lower income strata will benefit more from additional income than those at higher income levels (Cooke, 2007, p.29).

2) Education
The Education component is composed of the following two variables:

[1] Robin Armstrong's groundbreaking work on well-being in First Nations communities provided methodological guidance to the developers of the CWB.

1. "High school plus": the proportion of a community's population, 20 years and over, that has obtained at least a high school certificate.
2. "University": the proportion of a community's population, 25 years and over, that has obtained a university degree at the bachelor's level or higher.

Having at least a high school education has a particularly profound impact on one's options in contemporary Canada. Accordingly, a community's "high school plus" score has more impact than its "university" score on its overall education score. Specifically, the high school plus variable accounts for two-thirds of the education component, and the university score accounts for the final third.

3) Housing
The Housing component comprises equally-weighted indicators of housing quantity and quality.

1. Housing quantity: the proportion of the population living in dwellings that contain no more than one person per room.
2. Housing quality: the proportion of the population living in dwellings that are not in need of major repairs.

4) Labour Force Activity
The Labour force activity component is composed of the following two equally-weighted variables:

1. Labour force participation: the proportion of the population, aged 20-65, that was involved in the labour force in the week prior to Census Day.
2. Employment: the percentage of labour force participants, aged 20-65, that was employed in the week prior to Census Day.

Availability of Data

CWB scores have been calculated for 1981, 1991, 1996, 2001 and 2006. Scores for 1986 were not calculated as information on dwelling condition was not collected in the 1986 Census. CWB scores from a given census are available for every community in Canada with a population of at least 65, that was not an incompletely enumerated reserve[2], and whose global non-response rate[3] did not exceed 25%. In addition, CWB component scores (i.e. income, education, housing and labour force activity scores) are available for communities containing at least 40 households and 250 individuals.

Defining "Communities"

Communities are defined in terms of census subdivisions (CSDs). CSDs are municipalities or areas (such as Indian reserves and hamlets) that are regarded as the equivalent of municipalities. For purposes of comparison, communities in this analysis are categorized either as First Nations communities, Inuit communities or non-Aboriginal communities.

First Nations comprise those communities that Aboriginal Affairs and Northern Development Canada and Statistics Canada classify as "on-reserve." They include all CSDs that are legally affiliated with Indian Bands plus a selection of other CSDs in Northern Saskatchewan, the Northwest Territories and the Yukon Territory. First Nations communities that are not legally affiliated with Indian bands were first identified as "on-reserve" in 1996. For consistency, in analyses of 1981 and 1991 CWB scores, those communities are classified as First Nations.

[2] A reserve is deemed incompletely enumerated if it was not permitted to be enumerated or if enumeration was incomplete or of insufficient quality.
[3] Global non-response rate is the percentage of required responses left unanswered by respondents.

Inuit communities do not have specific legal status in Canada in the same way that First Nations reserves do, but Inuit organizations have pursued and signed Land Claim Settlements in four regions across Canada's north. These communities are governed in different ways in these four regions, either through public government, or some other form of Aboriginal self-government. All of these communities, however, are named within one of the four land claim agreements, and are thus considered Inuit communities for purposes of this study. The four regions are, from east to west:

- Nunatsiavut (Northern Labrador) – 5 communities
- Nunavik (Northern Quebec) – 14 communities
- The territory of Nunavut – 25 communities
- The Inuvialuit Settlement Region (Northwest Territories) – 6 communities

Although the last of the four land claim agreements (in Nunatsiavut) was only finalized in 2005, all regions previously have been represented by various national and regional Inuit organizations. Within these organizations, these communities have been considered "Inuit communities" on an informal or semi-formal basis. For this reason, in this study we look at these communities, and the regions they are a part of, in their present-day political alignment for the entire time-period of study (i.e. 1981 to 2006). Thus, when looking at Nunavut in 1981, we are looking at the communities that are today a part of the Territory of Nunavut, even though in 1981 they were politically and geographically a part of the Northwest Territories.

The 50 communities defined above remained consistent from 2006 back to 1991, but four communities, all in Nunavik, are not included in the 1981 data. These communities (Ivujivik, Povungituk, Kangirsuk and Umiujaq) were incorporated as communities either after, or shortly before, the 1981 Census, so they do not appear as CSDs in the 1981 Census data. This difference in community numbers, and the potential effect this may have on the Nunavik average rates, should be kept in mind throughout the present study.

CSDs that are neither First Nations nor Inuit communities are classified as non-Aboriginal communities. It is important to note that some non-Aboriginal communities have substantial Aboriginal populations. It is also worth noting that others who use the CWB index may choose to classify communities in different ways. For example, one could reclassify non-Aboriginal communities with substantial Métis populations as Métis communities (see for example Lapointe, Senécal and Guimond, 2009).

Comparing CWB Index Scores across Time

Four issues complicate the tracking and comparison of CWB scores across time. These are outlined below. Additional technical details are provided in *The Community Well-Being (CWB) Index: Methodological Details*, available at http://www.ainc-inac.gc.ca/ai/rs/pubs/cwb/cwbmd-eng.asp.

1) *Inflation*
Owing to inflation, the value of a dollar tends to decrease over time. Income data in the 2006 Census pertain to income earned in 2005, and are thus measured in 2005 dollars. To ensure that the CWB is measuring actual changes in income rather than the effects of inflation, income data from the 1981-2001 censuses were transformed into 2005 dollars using the Consumer Price Index.

2) *Missing Data*
CWB scores are not available for all communities in all census years. As indicated above, scores may be missing for a community in a given year because of non-participation in the Census, inadequate data quality, or insufficient population size. This issue did not affect any Inuit communities over the study period but has impacted First Nations and non-Aboriginal communities.

3) Changes in Community Boundaries
Communities can experience "boundary changes" between censuses. They can merge with other communities, divide into two or more communities, annex parts of other communities, etc. When this happens, it can be difficult to know what caused a change in a community's CWB Index score from one census to the next. Imagine, for example, that a community's score went from 70 in 1981 to 80 in 1991. If the community experienced a boundary change whereby it annexed part of another community, the improved CWB score could have been the result of a "real" change in the well-being of the original community, or a consequence of previously existing higher well-being in the annexed area, or a combination of both.

Sensitivity analyses revealed that boundary changes had little effect on average CWB scores when looking at the territories as a whole. While national and regional average CWB scores may be safely compared across time, however, boundary changes can impact the comparability of individual communities or smaller regions across time[4]. In Inuit Nunangat, Nunavik was the only region affected by boundary changes. Besides the four communities incorporated after 1981, as mentioned above, the town of Kuujjuarapik underwent a boundary change between 1986 and 1991. The boundary shift resulted in a change from a population of 193 in 1986 to 616 in 1991.

4) *Sampling Error*
Sampling error can affect some of the results in this paper, as most CWB is based on data from the 20% sample of households that received the "long form" of the Census. Consequently, it is possible that fluctuation (or lack thereof) in an individual community's CWB score from one census to the next is actually the result of sampling error. It is difficult to ascertain the impact of sampling error on a given community in a given census, though impact generally decreases as the population of a community increases. Researchers are reminded to interpret individual CWB scores with caution, and to emphasize general trends rather than census-to-census fluctuations. Note, however, that sampling error is much more likely to affect non-Aboriginal communities than Inuit communities, since all households in reserves and remote communities, including all Inuit communities, receive the long form of the Census. Consequently, sampling error would more likely be an issue when comparing Inuit communities with non-Aboriginal Communities.

Advantages and Limitations of the CWB Index

The CWB is undoubtedly a useful research tool. It is, however, only one of many means of measuring well-being and users should be mindful of both its advantages and limitations. As discussed above, the CWB was designed to meet specific research needs. Its ability to do so – unique among measures well-being in Canada – is its primary advantage. That unique ability derives from its use of the Census of Population. The limitations of the CWB, however, are also largely determined by its use of the Census.

First, the indicators of well-being included in the Census pertain mainly to socioeconomic well-being. Other important aspects of well-being are not addressed because they are not covered in the Census. Numerous attempts to quantify well-being have been made, and many composite indicators like the CWB have been developed. Although none can fulfill the research needs for which the CWB was designed, these measures highlight a variety of factors that may also be regarded as contributing to overall well-being. Physical and emotional health, cultural continuity

[4] Likewise, sensitivity analyses were based on only three groupings of communities: First Nations, Inuit and non-Aboriginal communities. As indicated above, researchers may decide to group communities in different ways. The extent to which boundary changes affect the average scores of different community groupings is unknown. Researchers who wish to compare individual communities or user-defined groups of communities across time, therefore, are encouraged to consider the possible effects of boundary changes.

and environmental conservation are three commonly employed indicators of well-being which are not included in the CWB Index[5].

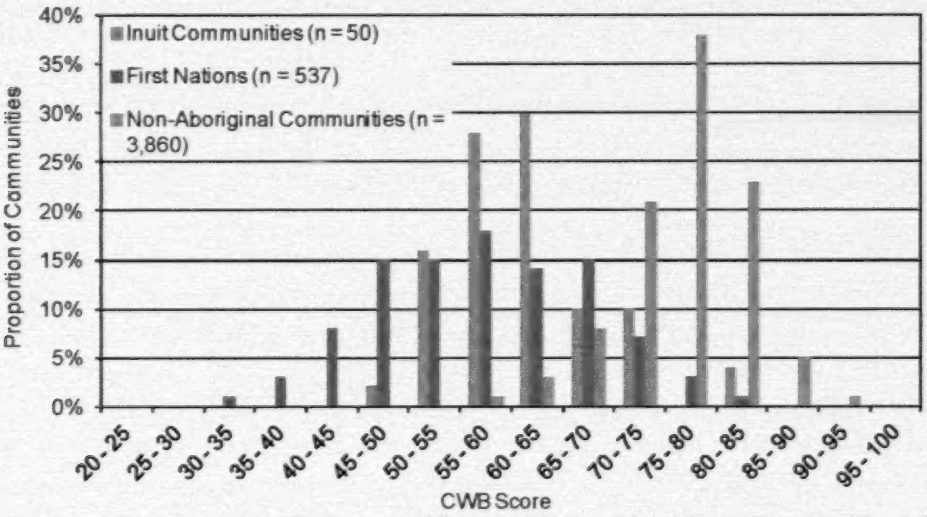
Compounding the problem of its overemphasis on socioeconomic well-being, the indicators used in the CWB may not capture fully the economic realities of some First Nations and Inuit communities. For example, many are still involved in traditional economic pursuits. These activities, such as hunting and fishing or unpaid help given to family or community members, despite contributing to material well-being, may not involve the monetary income or paid employment captured by the CWB Index. In addition, conditions in many remote and northern communities are very different from those in southern Canada. One aspect in particular that is important to consider when interpreting CWB scores in Inuit Nunangat is the high cost of living in the north. Since no Inuit community has all-year road access with the south, goods may need to be shipped during the summer, or flown in during the winter. Since these products tend to be much more expensive than in southern Canada, the dollar simply does not go as far in these isolated communities.

Results

CWB Index Scores, 1981-2006

Figure 1 shows the distribution of 2006 CWB scores for Inuit, First Nations and non-Aboriginal communities. Inuit communities, like First Nations, tend to have lower CWB scores than non-Aboriginal communities. None of the Inuit communities are in the higher ranges of scores reached by some of the non-Aboriginal communities, but they also do not go into the lower range of scores that some of the First Nations do.

Figure 1: Distribution of Inuit, First Nations and non-Aboriginal communities' CWB Scores, Canada, 2006

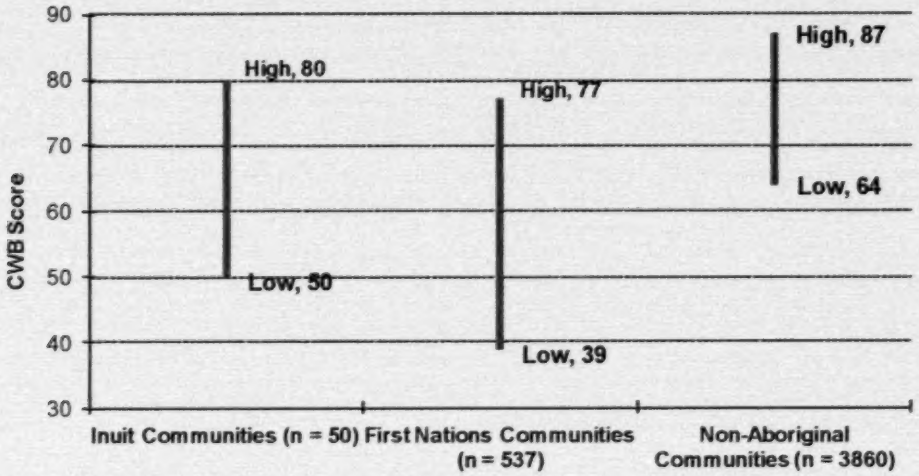


Comparing the range of scores in Inuit and other communities, there is greater variability in scores than for non-Aboriginal communities, but less than in First Nations communities. Figure 2 shows that 95% of Inuit communities score within a 30-point range (from 80 to 50). First Nations

[5] Descriptions and reviews of some recent and ongoing efforts to measure well-being are available from the UNDP (http://hdr.undp.org/en/statistics/) and the Canadian Index of Well-Being (http://www.ciw.ca/en/Home.aspx). Sharpe (1999), and Cooke (2005) may also provide insight into various well-being metrics.

communities, by comparison, score between 77 and 39, for a 38 point range. Non-Aboriginal communities show a range of 23 points (from 87 to 64).

Figure 2: Range of CWB Scores, Inuit, First Nations and Non-Aboriginal communities, 2006 (Excluding Outliers*)



**Outliers, defined as the 2.5% of communities with the lowest scores and the 2.5% of communities with the highest scores, are excluded. Excluding these extreme "tails" is standard practice when comparing relatively normal distributions.*

Looking at the average CWB scores of the three community types (Figure 3) Inuit communities perform do a little better than First Nations communities. The average CWB score for Inuit communities is 62 (out of a possible 100), 5 points higher than First Nations, but 15 points lower than the average score for non-Aboriginal communities.

Figure 3: Mean CWB Scores for Inuit, First Nations and non-Aboriginal communities, 2006

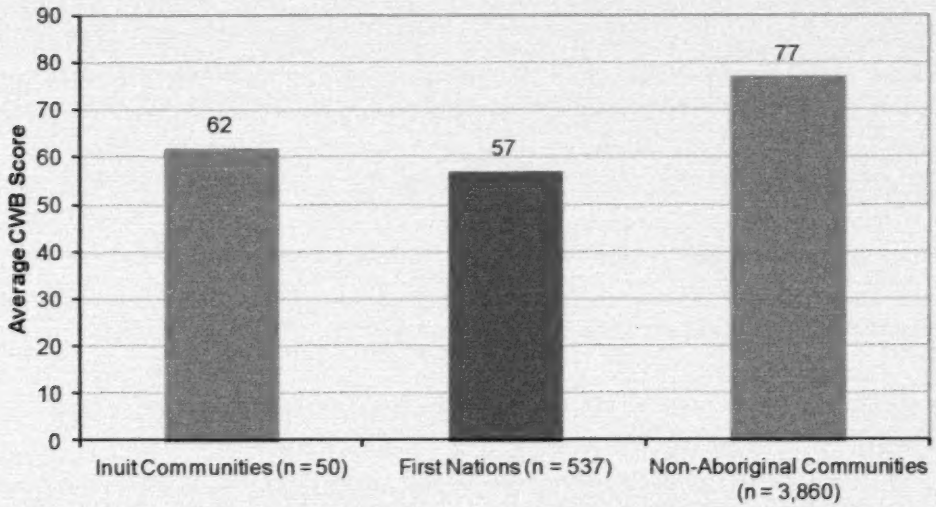
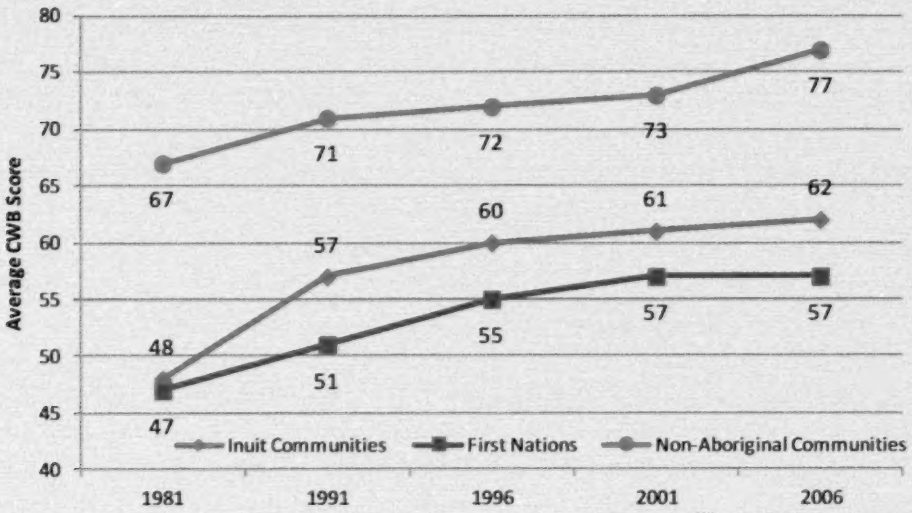


Figure 4 plots the average CWB scores for Inuit, First Nations and non-Aboriginal communities from 1981 to 2006. Looking at the time series, all three groups experienced an increase in their

average CWB score. Through 2001, Inuit communities had narrowed the gap with non-Aboriginal communities from 19 points in 1981 to 12 in 2001. In the last intercensal period (2001 to 2006), however, the gap widened somewhat as the Inuit communities score rose only slightly while the average score for non-Aboriginal communities rose notably.

Figure 4: Community Well-Being Averages Over Time, Inuit, First Nations and Non-Aboriginal Communities, 1981 to 2006



The levelling off of the average Inuit CWB score is reflected in the proportion of communities whose scores increased or were stable (as opposed to those that declined). The proportion of Inuit communities that improved or stayed the same began at over 90% from 1981 to 1991, but steadily declined over each intercensal period, ending with 60% in the 2001 to 2006 period. Non-Aboriginal communities, on the other hand, after some fluctuation, had almost 90% of communities improving or staying stable from 2001 to 2006.

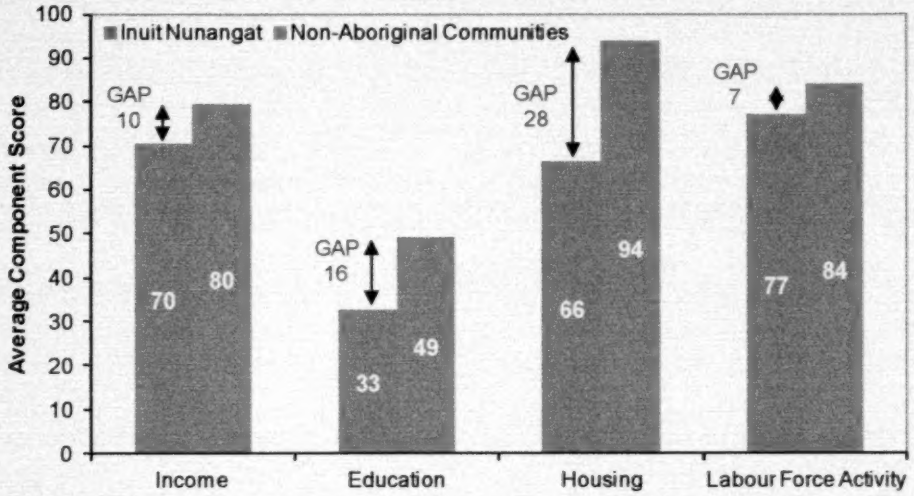
Table 1: Increase in CWB scores, Inuit, First Nations and non-Aboriginal Communities, 1981 to 2006

	Communities where CWB scores increased or were stable		
Period	Inuit Communities	First Nations Communities	Non-Aboriginal Communities
1981-1991	91% (42/46)	74% (281/379)	88% (3888/4435)
1991-1996	84% (42/50)	80% (361/452)	63% (2769/4402)
1996-2001	62% (31/50)	67% (310/465)	79% (2880/3651)
2001-2006	60% (30/50)	60% (272/451)	88% (3322/3760)

CWB Component Scores, 1981-2006

As discussed above, the CWB index combines indicators from four subject areas. The CWB as a composite score may not reveal differences between indicators, so an examination of these four components can provide a more detailed picture of the drivers of higher and/or lower CWB. Figure 5 compares the component scores for Inuit Nunangat with non-Aboriginal communities in 2006.

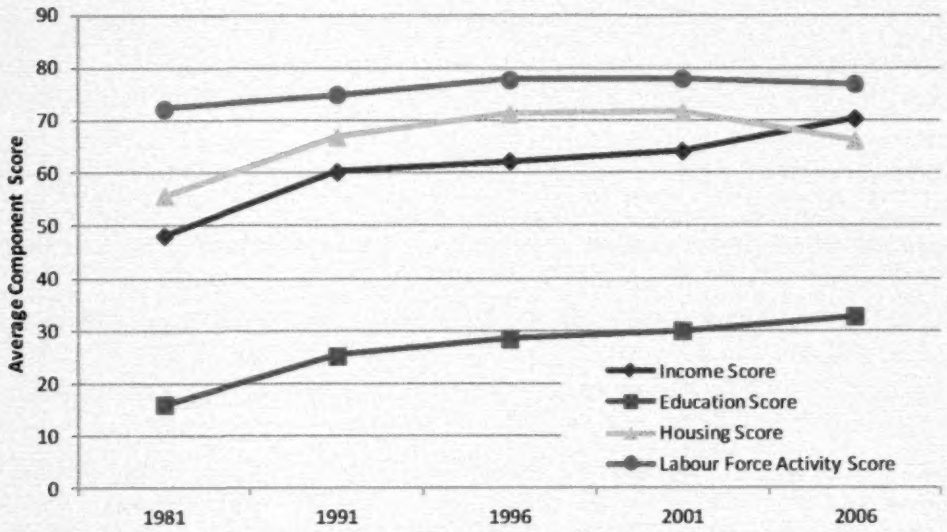
Figure 5: CWB Component Scores, Inuit and Non-Aboriginal Communities



Looking nationally, Inuit communities lag behind non-Aboriginal communities for all component scores. The gaps are present in the Income and Labour Force components, but the largest gaps are in Education (16 points) and Housing (28 points).

Figure 6 looks at component scores over time in Inuit Nunangat. All components scores have increased from 1981 to 2006, although labour force activity decreased slightly in the last intercensal period, and housing decreased a little more notably. Income and Education both increased steadily over every period (the Education score doubling from 16 in 1981 to over 32 in 2006).

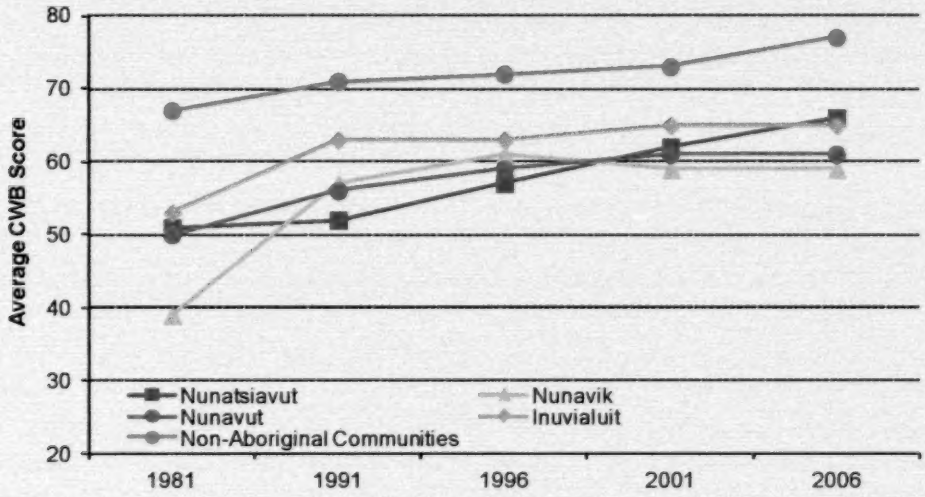
Figure 6: CWB Component Scores over Time, Inuit Nunangat, 1981 to 2006



Inuit Nunangat scores 1981-2006

Each of the four regions of Inuit Nunangat has had a different history in terms of Western contact, settlement into sedentary communities and self-determination within the larger Canadian political landscape. To what degree these and other factors have directly or indirectly affected socio-economic performance is beyond the scope of this analysis, but the present study indicates that the socio-economic situation does vary somewhat from region to region. Figure 7 plots the average CWB scores for the four regions of Inuit Nunangat from 1981 to 2006.

Figure 7: Community Well-Being Average Scores Over Time, Inuit Nunangat, 1981 to 2006



In general, the average scores for each region rose from 1981 to 2006, though at various trajectories. The Inuvialuit region and Nunavik, the highest and lowest averaging regions in 1981 respectively, both increased notably from 1981 to 1991, had some varying improvement and slight decline up to 2001 before levelling off from 2001 to 2006. Nunavut also showed neither improvement nor decline in the latest intercensal period, but showed steady improvement from 1981 to 2001. Nunatsiavut, after modest improvement from 1981 to 1991, rose steadily through 2006 and ultimately was the highest ranking score of the four regions. Following Nunatsiavut, Inuvialuit had the next highest average score in 2006, followed by Nunavut and finally Nunavik, though the gap between the top and lowest scoring region narrowed somewhat from the beginning to the end of the time series.

Component scores by region 1981 to 2006

Examining component and sub-component scores by region allows us to examine with greater specificity what contributes to patterns in CWB index scores.

Figure 8: Income Component Score, Inuit Nunangat and Non-Aboriginal Communities Over Time, 1981 to 2006

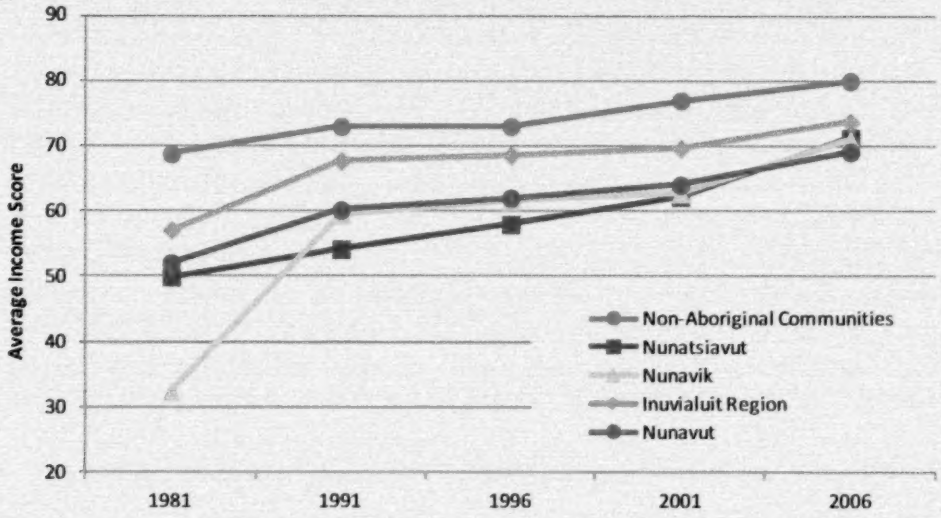


Figure 8 shows the Income score by Inuit region compared to non-Aboriginal communities from 1981 to 2006.Interestingly, the income trend for each Inuit region largely follows the trend for non-Aboriginal communities over the period from 1981 to 2006. Income rose for the first part of the series (particularly in Nunavik), slowed somewhat during the middle period and then a little more quickly in the last intercensal period. Only Nunatsiavut showed more of a slower and steadier increase in income over the period.

Figure 9: Education Component Scores Over Time, Inuit Nunangat and Non-Aboriginal Communities, 1981 to 2006

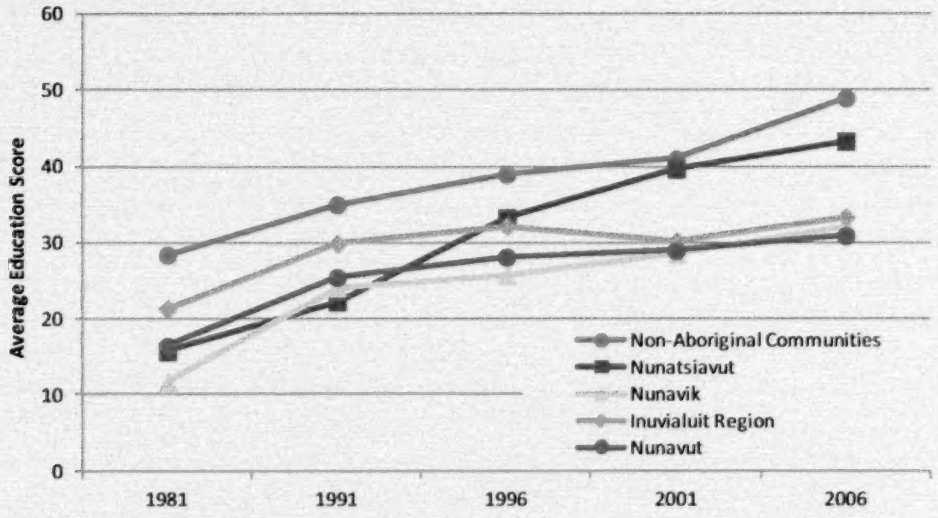


Figure 9 shows the Education component scores for regions of Inuit Nunangat, with the national average for non-Aboriginal communities. This Education score, as discussed above, is composed of High School attainment or higher (2/3 weight) and University Degree or higher (1/3 weight). Education scores improved for each region for every year, with the exception of a slight decrease for the Inuvialuit Region from 1996 to 2001. Nunatsiavut showed the greatest increase in average Education score, particularly since 1991, coming near parity with non-Aboriginal communities in 2001. In 2006, Nunatsiavut was about 10 points higher than the other three regions which have similar scores in the low 30s. When looking at this comparison of Education scores it is important to note that the particularly large jump in the non-Aboriginal high school completion rate may be at least partially attributable to changes to the 2006 Census questions pertaining to education. Statistics Canada made changes to the 2006 census questionnaire "to address suspected underreporting of high school completions" (Statistics Canada 2008). They concluded that the changes they made addressed the problem, but cautioned that apparent increases in high school completion rates between 2001 and 2006 may be an illusory effect of the greater accuracy of the 2006 data.

Figure 10: High School Plus Sub-Component Scores Over Time, Population 20 years and Over, Inuit Nunangat and Non-Aboriginal Communities, 1981 to 2006

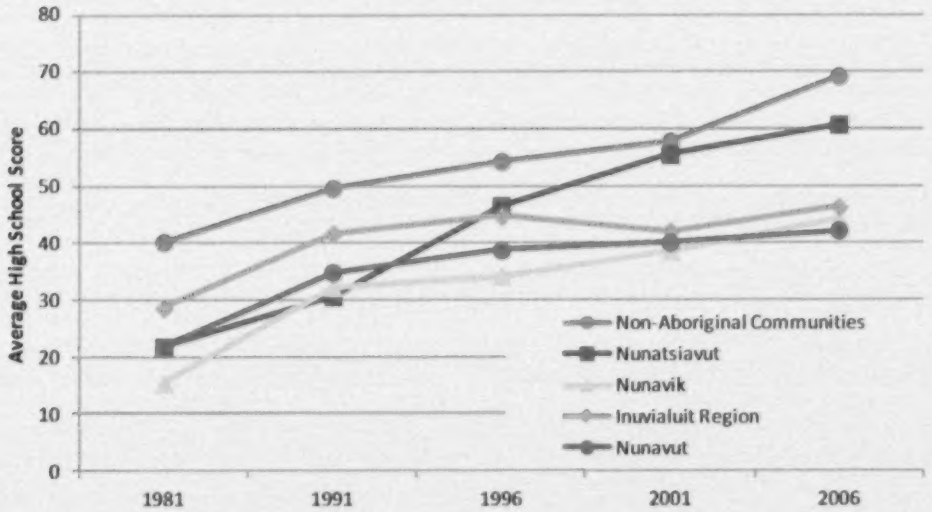


Figure 10 shows the High School plus sub-component score for the population 20 years and over. The pattern here is virtually identical to the overall Education component (see Figure 9 above). Compared to a steady improvement in the high school graduation in non-Aboriginal communities, Inuit Nunangat improved modestly, and the gap persisted between non-Aboriginal communities and most Inuit regions. Nunatsiavut is an exception to that, with stronger improvement, particularly from 1991 onwards.

Figure 11: University Degree Plus Sub-Component Scores Over Time, Population 25 years and Over, Inuit Nunangat and Non-Aboriginal Communities, 1981 to 2006

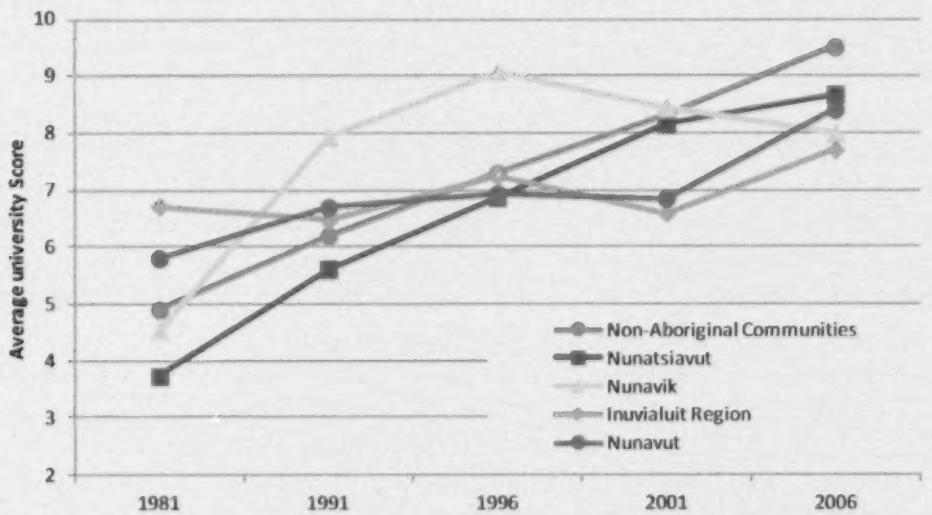
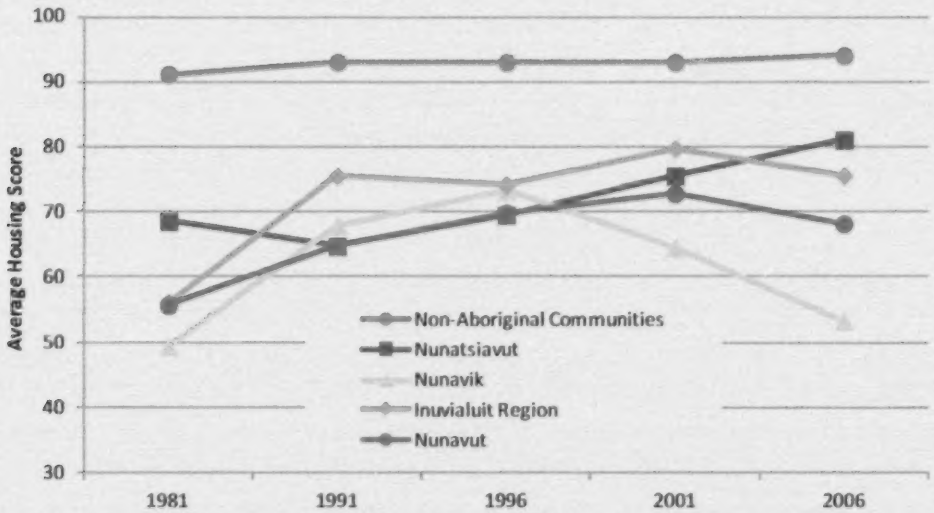


Figure 11 shows the University Degree subcomponent. This is the proportion of the population aged 25 and over with at least a university degree. The University sub-component in some ways shows the most interesting results, although these might be the most difficult to interpret. The

average scores for all regions, including non-Aboriginal communities, fluctuate between 1981 and 2006. Although all Inuit Regions lag behind non-Aboriginal communities in 2006, this was not formerly the case. In particular, the University score for Nunavik rose markedly before falling back after 1996. One important consideration, however, is that the overall University scores for all groups are low (the high, which was for non-Aboriginal communities in 2006, was under 10). This may increase the possibility that different populations within communities are affecting the overall score, based on the idea that many of the non-Inuit in these communities live there for work reasons, and are thus generally well-educated. Indeed, while the national proportion of non-Aboriginal Canadians with a university degree is around 20%, the proportion of the non-Aboriginal population in Inuit Nunangat with a university degree is just under 40% (2006 Census of Population, Custom AANDC tabulations). Berger (2006) notes that Inuit in Nunavut tend not to hold most of the higher-level jobs in the public service- jobs which require a good education. As stated above, one must always be mindful of the relatively small number of Inuit communities when interpreting larger fluctuations in scores, but while this might apply to Nunatsiavut, Nunavik is the second largest region in Inuit Nunangat.

Housing

Figure 12: Housing Component Scores Over Time, Inuit Nunangat and Other Canadian Communities, 1981 to 2006



The Housing component is based on the crowding of dwellings, as well as the self-reported quality of the dwelling (i.e. not in need of major repairs). Figure 12 shows the average Housing scores for Inuit Nunangat and non-Aboriginal communities from 1981 to 2006. Looking at all regions from 1981 to 2006, there is fluctuation between years, although there is general improvement for all regions. Nunavik showed the greatest decrease from 1996 to 2006, though Nunatsiavut is the only region that did not decrease in the last intercensal period. Housing in non-Aboriginal communities by comparison is consistently high, and slowly improving with little variation.

Figure 13: Housing Quality Sub-Component Scores Over Time, Inuit Nunangat and Non-Aboriginal Communities, 1981 to 2006

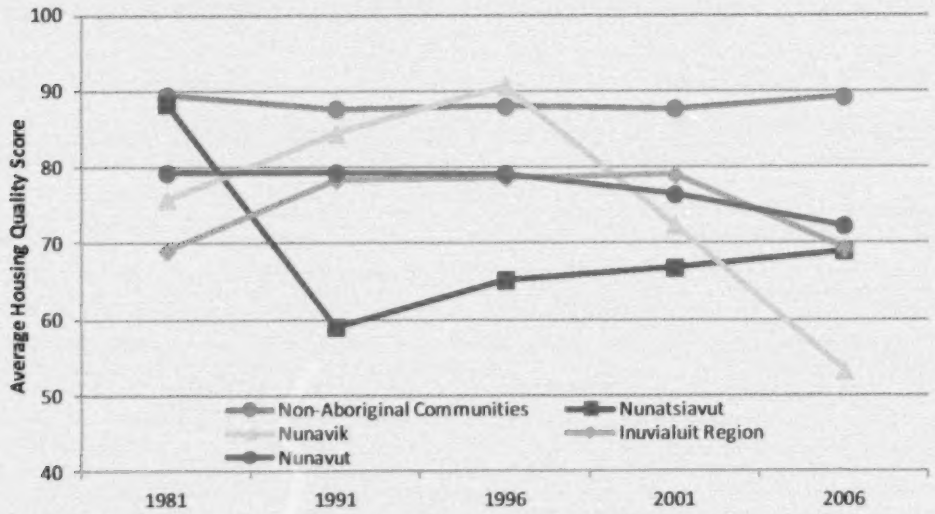
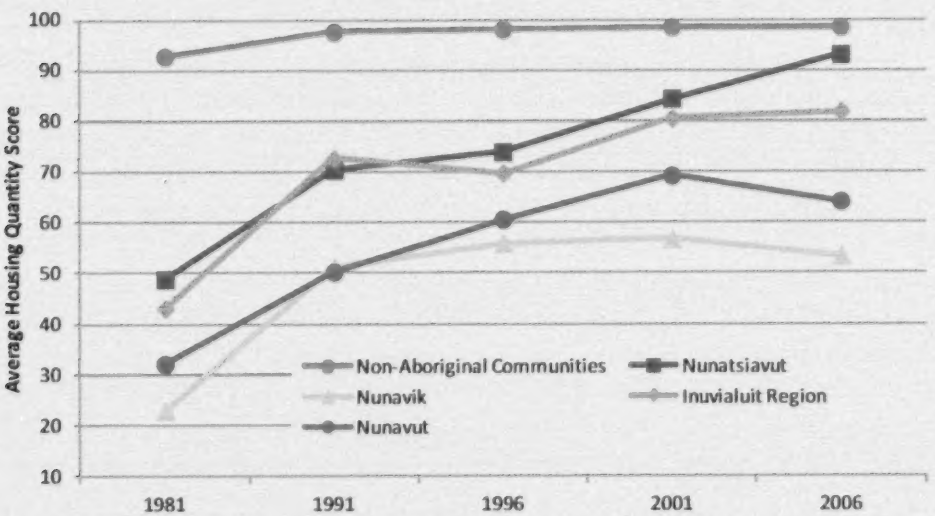


Figure 13 looks at the Quality of housing, defined by whether the reporting occupant believes the dwelling does not require major repairs. Compared to consistently high Housing Quality scores for non-Aboriginal communities, there is a great deal of variation between Inuit regions. Nunavut and Inuvialuit Region are fairly consistent, though they average lower scores than for non-Aboriginal communities. Nunavik, on the other hand, rose dramatically from 1981, and even averaged higher than the rest of Canada in 1996, only to fall even more dramatically, so that they were the lowest scoring region in 2006. Nunatsiavut, by comparison, fell from near parity with non-Aboriginal communities in 1981, to the worst-averaging region in 1991.

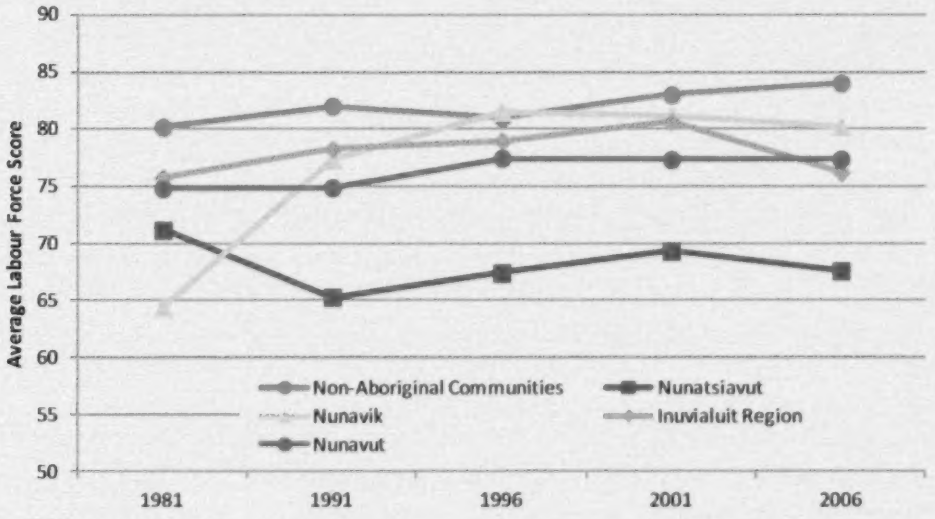
Figure 14: Housing Quantity Sub-Component Scores Over Time, Inuit Nunangat and Non-Aboriginal Communities, 1981 to 2006



Housing Quantity, defined as the population living in conditions with one person per room or less, is shown in Figure 14. Similar to Housing Quality, non-Aboriginal communities have a Quantity score consistently near the top of the scale. Inuit Nunangat all improved from 1981 to 2006. Although the gap with non-Aboriginal communities did narrow over the period, there remains a spread between the highest and lowest averaging Inuit Regions.

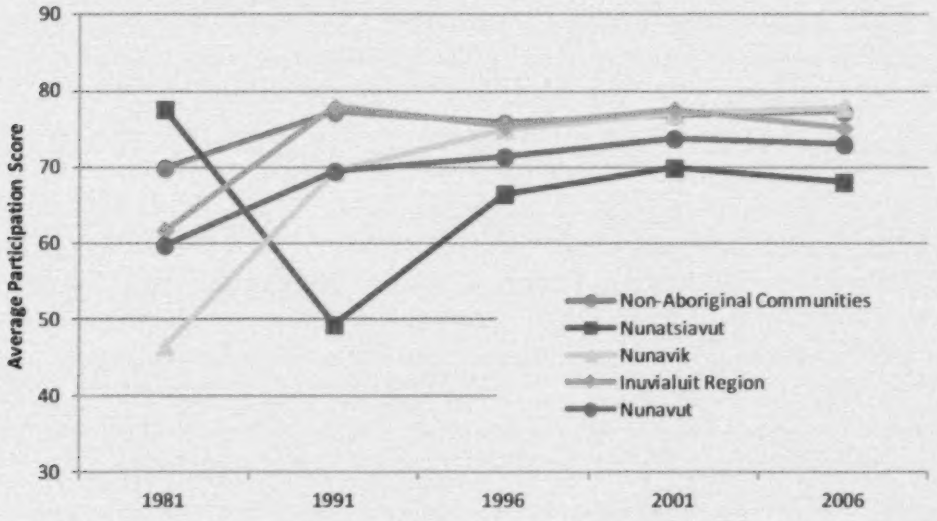
Labour Force Activity

Figure 15: Labour Force Component Scores Over Time, Inuit Nunangat and Non-Aboriginal Communities, 1981 to 2006



Labour Force Activity for Inuit Nunangat is shown in Figure 15. This is a combination of the labour force participation rate, as defined by Statistics Canada, and the proportion of the labour force who are employed. More so than the first three components, Labour Force Activity seems to demonstrate some notable differences between Inuit Nunangat. Nunavik rose from being the lowest averaging region in 1981 to being the highest in 2006, even averaging higher than non-Aboriginal communities in 2001. Inuvialuit Region and Nunavut maintained fairly steady scores throughout the study period, although Inuvialuit Region dipped slightly in the last intercensal period. Nunatsiavut is an interesting case, as their Labour Force score is about 10 points lower than the next lowest region, even though their Income score (see Figure 8) is comparable with the other regions.

Figure 16: Labour Force Participation Sub-Component Scores Over Time, Inuit Nunangat and Non-Aboriginal Communities, 1981 to 2006



The labour force Participation score is plotted in Figure 16. The Participation score in Inuit Nunangat is interesting, considering two regions (Nunavik and Inuvialuit Region) are roughly on par with non-Aboriginal communities, with Nunavut close as well. This compares well with the regions in 1981, where there was a much wider variation between regions. Nunatsiavut, which had a higher Participation score than non-Aboriginal communities in 1981, again seems to differ from the other regions over the period of study. It is impossible to say what caused the wide variation in Nunatsiavut between 1981 and 1991.

Figure 17: Employment Sub-Component Over Time, Inuit Nunangat and Non-Aboriginal Communities, 1981 to 2006

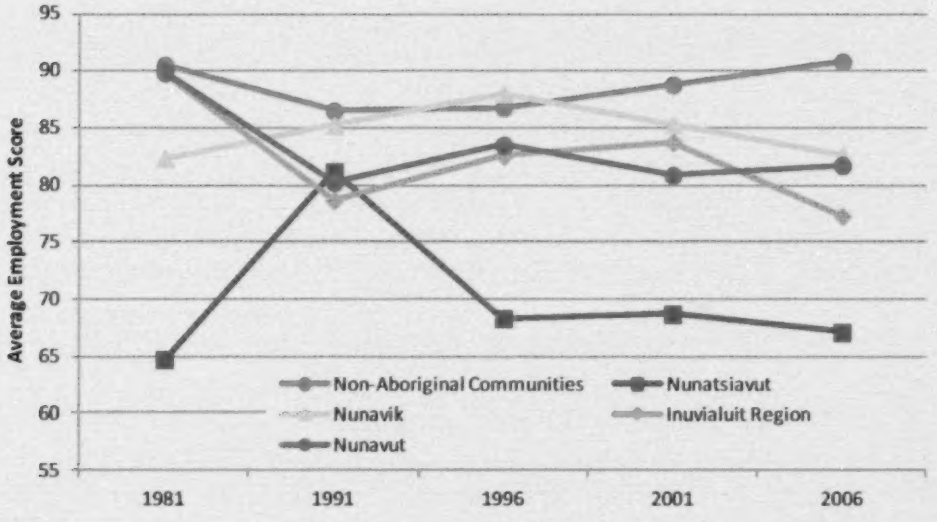


Figure 17 charts the Employment score for Inuit Nunangat. The Employment score for non-Aboriginal communities was high in 1981 and again in 2006, with a dip from 1991 to 1996. Inuit

Nunangat, on the other hand, have had varying trends before 1996, but since then all have experienced stagnant or declining Employment scores. In 1981, the scores for Nunavut and Inuvialuit Region were comparable to the average for non-Aboriginal communities, but by 2006 the gap had widened for both regions by 2006. Nunavik in 2006 had the highest Employment score for all Inuit Nunangat, while Nunatsiavut had a score well below that of the other three regions. Similar to the Participation score above, it is not possible to explain the change in Nunatsiavut's score from 1981 to 1991 and again from 1991 to 1996, but these changes should be interpreted with caution, since Nunatsiavut is comprised of only 5 communities.

Discussion

The Community Well-Being index is a general overall measure of socio-economic well-being that allows researchers to look at trends in well-being over time and across Canada. Results for Inuit communities were mixed. Some Inuit communities scored higher than others, but in general most Inuit communities scored lower than non-Aboriginal communities, though the lowest scoring communities did not score as low as some First Nations communities.

Although the scores of the majority of Inuit communities remained steady or improved over each intercensal period, the proportion fell from over 90% during the period from 1981 to 1991, to 60% from 2001 to 2006. This is reflected in the average scores for Inuit Nunangat, where improvement occurred over the entire period of study, but slowed in the latter years. At the same time, gains in CWB averages for non-Aboriginal communities led to a slight widening of the gap with Inuit communities. This gap increased in the last intercensal period, though the improvement in the average score for non-Aboriginal communities may be at least partially attributable to methodological differences between how the education content was collected by Statistics Canada between the 2001 and 2006 censuses.

Looking at the different regions of Inuit Nunangat, all show a rising trend, though the comparative positions of the four regions have fluctuated over time. By 2006, Nunatsiavut and the Inuvialuit Settlement Region averaged similar scores, with Nunavut and Nunavik averaging somewhat lower scores. Although all regions with the exception of Nunatsiavut showed no improvement in the last intercensal period, it should be noted that the lowest averaging region in 2006 (Nunavik) nevertheless scored higher than the highest averaging region in 1981 (Inuvialuit Region) which constitutes a demonstration of the overall progress achieved.

Looking at the four component scores, the largest gap between Inuit and non-Aboriginal communities is in Housing, followed by Education. Looking at the component and subcomponent scores for each region, there are a variety of different stories, and shifting trends. No one region consistently scores best (or worst) across the various categories, suggesting that the CWB should be a point of departure for understanding well-being, not the final word on the wellness of Inuit communities.

It might also be noted that Nunavik, and more frequently Nunatsiavut, showed notable fluctuations in various component and sub-component scores over time. While the Census is the most reliable and largest data source for socio-economic statistics in Inuit Nunangat, the small number of communities, particularly in Nunatsiavut suggests that we must be cautious in interpreting some of these results, and speculating on possible determinants.

The Community Well-Being index is a measure covering a community's entire population. We caution against regarding it as a proxy for Inuit residents because of presence of sometimes substantial numbers of non-Inuit residents. These were included based on the perspective that non-Inuit residents contribute economically, socially and culturally to the communities in which they live, as well as for practical reasons pertaining to data suppression While it is true that the non-Aboriginal population constitutes a minority in all of these communities, there are several characteristics that separate this group from the general Canadian population (though it should be noted that in the larger, and higher-scoring communities, such as Iqaluit and Inuvik, Inuit make

up a smaller proportion of the population compared to other communities). In general, there is a significant proportion of this northern non-Aboriginal population that are younger, and have moved to the north for employment. This group is generally well educated, well housed and earning relatively high salaries, in some cases supplemented with northern or isolation bonuses. Such a difference between Inuit and non-Inuit populations would likely produce a gap in the scores within communities along these lines. Future work will be required to probe deeper into this, and other aspects of well-being in Inuit Nunangat.

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